

The market for preferences

Peter E. Earl and Jason Potts¹

School of Economics, University of Queensland, Brisbane, QLD4072, Australia.
p.earl@economics.uq.edu.au, j.potts@economics.uq.edu.au

Abstract. Learning processes are widely held to be the mechanism by which boundedly rational agents adapt to environmental changes. We argue that this same outcome might also be achieved by a different mechanism, namely specialization and the division of knowledge, which we here extend to the consumer side of the economy. We distinguish between high-level preferences and low-level preferences as nested systems of rules used to solve particular choice problems. We argue that agents, while sovereign in high-level preferences, may often find it expedient to acquire, in a pseudo-market, the low-level preferences in order to make good choices when purchasing complex commodities about which they have little or no experience. A market for preferences arises when environmental complexity overwhelms learning possibilities and leads agents to make use of other people's specialized knowledge and decision rules.

Keywords: preferences, learning, knowledge, bounded rationality, choice theory, consumer behaviour, evolutionary economics

JEL: B52, D0, D8

Introduction

A central concern of modern microeconomics is how boundedly rational agents cope with ongoing change in the economic environment. This encompasses analysis of expectations, uncertainty, evolutionary processes of adoption and adaptation, and statistical mechanisms of search and selection. The theoretical core of this problem is the economics of learning,² and the predominant way of seeing things is to view learning as the way (the only way) that agents cope with change. It follows, then, that this is how the economic system integrates change. Note what has happened: How do agents cope with change? – has been read into – How does the economy integrate change? In both cases, the answer is by learning.

But learning is only one mechanism by which agents and economic systems integrate change. Another mechanism – arguably the more ‘economic’ mechanism – is by a process of specialization and re-integration about the division of knowledge. We approach this by considering the nature of choice in a world where the opportunity set of each agent is rapidly changing and so the opportunities for learning are prodigious. We ask, what happens when agents with constraints on time and attention live in an evolving

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² For example, Conlisk (2001), Gigerenzer and Selten (2001), Gigerenzer and Todd (2001), Schonhofer (2001), Hayekawa (2000), Barucci (1999) Blonski (1999), Brenner (1999), Rosser (1999), Williamson (1998) and Lipman (1995).

knowledge environment in which they never quite step into the same market twice? How do they cope with the problems of *lifestyle maintenance* as market opportunities change about them?³ Unlike Lancaster (1966), we see these problems as entailing rather more than delimiting new goods as particular points in existing characteristics-space preference maps. New goods – which often have novel features – require new preferences. Where do these come from? And is learning the only way of getting them?

This paper follows on from Earl and Potts (2000), where we examined the statics of agents with too much choice. We were concerned with the optimal design of shopping environments and found an important distinction between browsing and search behaviour. Here, our concern is with the dynamics of agents with too much choice. We propose that boundedly rational agents cope with high rates of change not only by learning but also by specialization. Learning, even statistically conceived with diffusion models, does not provide anything like a full account of the way in which economic systems integrate new knowledge. In our view, the predominant mechanism is distributed specialization and reintegration, as a division of knowledge process coordinated in what we shall call a *market for preferences*. There are limits to learning, but these are not the limits of the growth of knowledge, because costs of individual adaptation can be offset by structural adaptation as agents specialize in bounded domains of knowledge and then coordinate those outcomes (see Loasby 1999). This mechanism is normally associated with the growth of producer knowledge, in the form of the division of labour (although see Smith 1976: 13). But it applies on the consumer side too.

We connect this mechanism to choice-theory with the concept of high-level and low-level preferences. High-level preferences are those of innate and executive rank over behaviour, whereas low-level preferences refer to the specific and local preferences that are the products of learning and specialization. It is of course possible that we could define these the other way, with low-level preferences as the ‘deep’ preferences, and high-level preferences as the ‘operational’ preferences. We think it more intuitive, and in line with computer science, if we think of high-level as deep or executive programs, and low-level as the programs (or decision rules, Hodgson 1997, Vanberg 1994) associated with specific problem domains. These low-level preferences are what are potentially acquired in a market for preferences.

When we speak of the existence of a ‘market’ for preferences, our focus is not on the idea that a market exists if a commodity has a price relative to other commodities, that emerges as a result of the interaction between those who wish to acquire more property rights in respect of it, and those who wish to reduce their holdings or dispose of potential output so long as they can do so on particular terms. Nor are we focusing on a particular physical domain in which exchanges occur. Rather, we are employing the broader view of markets presented by Hodgson (1988, p. 174) – that is to say, ‘a market is a set of social institutions in which a large number of commodity exchanges of a specific type regularly take place, and to some extent are facilitated and structured by these institutions’. Rosenbaum (1999, 2000) and Menard (1995) advance similar views, also incorporating the first two perspectives, both of which apply to some extent with the market for preferences. As an example of the first, consider the existence of a price for interior design consulting services, such as colour coordination. Suppliers of these

³ See Metcalfe (2001), Steedman (2000), Aversi *et al.* (1999), Bianchi (1998), Witt (1991) for discussion and theorizing about the nature of this problem. It is notable that this problem only seems to have been recognized by Austrian, Evolutionary and Institutional economists. There are of course many other sightings of the aspects of this problem in these bodies of literature.

services may be readily identified via the Yellow Pages, business directories, social networks, or Internet search engines, all of which may be classed as social institutions. As an example of the second view of a market, consider the existence of ‘better homes and gardens’ exhibitions and suchlike which take place annually at particular locations; these are social institutions, too. But this broader view of markets is consistent also with many people obtaining particular complex consumer durables (cars, for example) after calling upon the expertise of someone within their social networks who is *well-known* by network members as being *normally* able and willing to offer valuable assistance without charging any fee.

We proceed as follows. We begin by considering why agents would specialize in preferences. We then present this view of preferences as rules in a decision system in which there are high-level control rules and low-level operational rules. This leads us into discussion of the nature of the agent’s choice problem as one of problem solving in relation to the structure of complementarity between complex goods and services that must work together as an ensemble. We present a number of examples. Finally, we conclude that this view of preferences opens the way for the import of industrial-organization theory into consumer theory, and for some reconsideration of the economics of growth, transition and development.

Why specialize in preferences?

All economists know that as the market grows there is increased opportunity for specialization of skills (Stigler 1951). Those who have read Allyn Young (1928) will also know that this process implies structural evolution. But it has not been widely recognized that if constraints of time and attention place limits on learning, then this process must also occur on the consumer side as well.

If an economy is evolving, such that the number of goods grows as an arithmetical progression ($t, n \rightarrow t+1, n+1$), and if we think of individual preference orderings as units, then if there are n goods and we ignore computational overheads, each preference map will require $(n-1)^2$ combinatorial bits to construct. The implication is that an economy growing arithmetically in opportunities will require geometric expansion of computation and soon run into scarcities of time and attention (a Malthusian formulation, so to speak). Economic evolution, as the growth of knowledge, would thereby tend to cause preference maps to explode unless fitted with suitable computational adaptors and transformers. Consumers could end up, as the saying goes, ‘spoilt for choice’, particularly if they live in economies that have offered restricted ranges of choice and are suddenly opened up to the potential for global shopping. Examples include consumers in New Zealand after the market liberalization instigated by the Labour government in 1984, consumers in former socialist nations after 1989 and, more recently, anyone who has begun to experiment with Internet shopping. Neoclassical consumer theory might have approximated reasonably well the business of choosing in a general store in Adam Smith’s day, but it seems ill-suited for modelling what goes on when consumers are buying in the fast-changing markets for computers, cars and household electronics, or are deserting small, local record stores in favour of on-line retailers with vast and ever-changing catalogues of music by unfamiliar performers.

The underlying problem is of agents knowing they need to solve a problem, but not knowing how to go about it because they lack specialist knowledge of that problem domain. Our concern is specifically with how they make such choices in the face of

ignorance and uncertainty where the solution is bound up with acquiring, somehow, good rules for choice. The standard explanation is that agents learn what to do, which is to say they construct specialized preferences themselves. The other possibility is that they make use of other people's learning. This is something we witness in the expansion in the scope of the service sector or in various institutional features of markets, such as the existence of shopping malls to provoke and permit browsing behaviour and furnish expertise (Earl and Potts 2000) and the proliferation of specialized consumer magazines. It is also clear from everyday experience that different consumers know more about some products than others and choice is frequently undertaken with the aid of social mentors, either people we know, or ones we have never met, such as the consumers that contribute product reviews to websites such as Amazon.com.

Of course specialization and the division of knowledge may not always occur on the consumer side. It is an emergent property of an evolving economy with boundedly rational agents. If either of these conditions is not present, so that the economy is stationary or agents are allowed enough time and resources to learn all new things, then consumer specialization need not occur and a market for preferences need not emerge. However, if economic evolution does occur and agents are boundedly rational, then a process of structural adaptation will begin as agents specialize in solving particular knowledge problems.

An evolving economic system is one in which change and variety arise from an entrepreneur-driven growth-of-knowledge process of competitive rivalry involving the creation and destruction of processes, structures and commodities (Earl, forthcoming). The process of economic evolution involves a continual flow of novelty into and out of consumer markets. This is why, insofar as we are dealing with markets for knowledge-intensive durable goods that may be consumed for years before being replaced, the agent never steps into the same market twice. Economic evolution generates novelty, and this creates ongoing problems for consumers. The learning-based approach is designed to analyze disturbances as occasional exogenous shocks. It is not designed to analyze a cumulative and endogenous process of change. There are limits to individual learning but by the mechanism of specialization and the division of knowledge these limits can be over-ridden. The integration of continuous flows of novelty into an economic system is facilitated by the structural adaptations of a market for preferences. The market for preferences is an evolutionary market mechanism (Potts 2001).

The extent of specialization in preferences is limited by the extent of the market for preferences and there seem to be two such limits: (1) the limits of learning in terms of the individual, and (2) the limit to specialization in terms of coordination of all agents.

First, it is clear that humans have tremendous information-processing capabilities. So, provided the cost of maintaining existing knowledge is negligible, agents with infinite longevity could well come to know all things by a process of learning. But if knowledge is vast and time and attention are scarce, then the scope of individual expertise will be constrained to only a subset of consumer knowledge. When everything is in a perpetual state of flux, mortal agents will know some things well, but not everything (Shackle 1972).

Specialized learning is also limited by the potential to coordinate an ever more complex system through a basis of common knowledge and shared understanding. The nature of mechanisms to produce common knowledge has been one of the major challenges in artificial intelligence, evolutionary psychology and philosophy. Yet, the

framing problem, as it is known, has never really been a major concern for microeconomic theory because the frame given by preferences and prices is always unambiguous. But if we interpret the consumer problem as one of solving high-level problems according to (individually known) high-level preferences, then a complete set of market prices serves to frame the problem if and only if the agent also has the complete set of solutions to the problem before them and knows how they should be interpreted. Unfortunately, the problem is more complex still. Not only will the agent need to know the complete set of substitutes, their characteristics and where the best prices are to be found, but also the complementary relations extending to other commodities she consumes.

For example, if the problem concerns replacing tyres on a car, then the set of prices for all tyres that fit the car would be relevant information and could be obtained quite rapidly by telephoning rival tyre retailers. But if we also include the relation between tyres and the suspension of the car and the consequences of also upgrading to larger diameter alloy wheels (mechanical interface), or driving conditions (environmental interface), or driving style (human interface), or perhaps between tyres and risk preferences in other areas (such as the transport of children), or even social prestige associated with having the ‘right’ sort of tyres, then it is apparent there is a lot to know about tyres, most of which is not common knowledge. Only experience will tell whether particular varieties of tyres have an embarrassing tendency to squeal at relatively low speeds, have particularly fragile side walls, are prone to delaminate or go out of true, lose grip easily in the rain, howl on roads with coarse-chip surfaces, or achieve V-rated performance standards at the cost of rapid wear rates. Such experience as an individual household accumulates whilst running one or two cars will say nothing about what the experience might have been with the many alternative contemporary brands that might instead have been purchased. Moreover, experience then becomes obsolete as tyre technology is improved. This is why it may pay to read the motoring press carefully, talk about tyres with knowledgeable peers and consider trusting the suggestions of tyre retailers.

So, how general is this problem and how much specialization might we expect? In other words, what is the scale and scope of the market for preferences? We suggest the way to frame this question is to partition high-level preferences for ordering solutions already compiled from low-level preferences in the form of systems of rules necessary to compile these solutions in the first place. These low-level preferences, effectively preference bundles, are the commodities in the market for preferences.

Specialization in preferences, then, is to be strictly understood as a statement about low-level preferences and specifically as about the sort that are not inborn. Our theory does not apply to preferences over, say, sweet-tasting things or blue things or ethical outcomes or winning strategies. Rather, it is addressed to preferences over, say, matt-finish easy-clean wallboard and vertically-jointed tongue-and-groove polished timbers, or Michelin over Firestone tyres, and other commodities and services for which we have no reason to suppose an innate preference with which to make efficacious choice. These are knowledge-intensive choice situations yet ones that the agent may not make very often, perhaps only every few years or on a handful of occasions during a lifetime, but which contain the potential for costly error if these choices are not made well. How do agents cope when their native preferences are simply not up to the task complexity implied in the situation? Should they learn, or should they use other people’s preferences? Their problem, it should be noticed, is similar to that of a firm considering

entry into a market with whose production methods and marketing systems it is unfamiliar.

Yet is this really economics? Perhaps our concerns would be better expressed in the marketing literature? To this we say: (1) marketing is ultimately information economics anyway (Earl 1999); and (2), this problem cuts to the core of microtheory with the question of where agents actually get their preferences over new goods from. The usual solution is to suppose that *all* agents learn them. Another is that *some* agents learn them, or rather specialize in particular knowledge domains and so experimentally construct them at some cost to themselves, and other agents then seek to access this learning in the market for preferences. Consumers of preferences may then fit these low-level preferences into their own systems of high-level preferences and proceed with greater competence and less uncertainty into the primary market for which their preferences were designed. Preferences about particular commodities have value because they are costly to acquire, and it is also why a quasi-market formulation seems appropriate.

The point then is that the process of specialization, induced by the growth of knowledge, occurs over low-level preferences. That is, some agents learn, and then bundle their learning into a system of preferences as rules for choice that they may market as inputs into high-level preferences. Agents retain sovereignty over high-level preferences but may not much know what to do with them. In the event of significant product change and the live possibility of expensive mistakes, there is value in specialization over preferences.

The distinction between advice and acquired preferences

The distinction between high-level and low-level preferences is an implication of bounded rationality. The notion of bounded rationality hitherto has mainly been applied to consumer research in respect of the problems associated with discovering the best way of meeting specific goals. It has been applied to the problem coping with a mass of dispersed information about where particular goods may be found and at what prices, or the problem of coping with an overload of information about what is available. Central to this paper is the idea that bounded rationality affects consumers further back in the process of choice because they have a problem of knowing what they want and how to get it. Although we see agents as having complete high-level preferences, these concern a limited set of core constructs and hence our analysis is consistent with Herbert Simon's view that cognitive agents are driven to use rules to choose. We see low-level preferences as incomplete and as *expertise-based rules that enable consumers to rank products in terms of characteristics that are subordinate to their higher-level ends*.

As any academic economist will know from the experience of trying to teach orthodox preference theory, the notion of a preference ordering is not particularly intuitive for the layperson, and it may appear that we are muddying the waters yet further by proposing a partitioning of the preference ordering concept. The layperson's natural reaction, and probably that of many academic economists, would probably be to say that what consumers get, when they call upon the specialized knowledge of others to help themselves choose, is advice, pure and simple. Typically, however, the advice that consumers receive is not simple, of the form 'If you are thinking of buying a [broad class of product], then, knowing you as I do, I suggest you should buy a [brand/model], period.' Instead, it is prone to be of the 'It all depends' variety, presenting a variety of

cases for and against various products, and it is this characteristic of advice about how to choose that provides the key to understanding the difference between high- and low-level preferences.

Advice is proffered in a conditional manner for a variety of reasons. One is that it enables the source to establish credibility or verify their reputation for expertise: in contrast to a definitive answer, carefully considered suggestions do not give the impression of a hard sell or a fixed mindset. Indeed, if a particular source of advice developed a widely known reputation for making recommendations of a particular kind, then there is no need even to consult the source.⁴

Secondly, by providing conditions under which it would be appropriate to make a particular choice, the expert provides the consumer of the advice with the means to justify that choice to others, or even potentially to offer advice to others trying to make choices in the area in question. In the latter case, the demands on the time of the original expert may thereby be reduced.

Thirdly, the conditional nature of advice is a reflection of the limited knowledge that the expert has regarding the high-level preferences of the person seeking the advice. That is to say, the expert typically will be somewhat unclear about how the consumer of the advice makes high-level trade-offs. They may not appreciate which lower-level product characteristics the consumer will be oblivious of, or have trouble evaluating. It is therefore incumbent on the expert to make a variety of suggestions of the form ‘if you are really trying to do X, then probably this product is most appropriate because ...’, whereas if you are more interested in trying to do Y, then....’. If consumers of advice are able to articulate fully fleshed-out preference orderings in terms of characteristics that could be offered by the kinds of product under consideration, then they would not be transacting in the market for preferences but in the market for the end products: all they need is information about what is available and how to locate it on their preference maps. In some cases, they may actually know what is available within their budget ranges, and know about the lower-level characteristics of these products, and yet have trouble choosing despite having high-level preferences because they do not know how to make the links between the product characteristics and their high-level preferences. Despite their knowledge, then, they still need to participate in the market for preferences.

Consider the case of someone seeking advice about buying a car, and who has expressed a concern with matters of safety, running costs and life in a status-conscious suburb. The supplier of lower-level preferences does not know quite how the consumer will resolve any safety/economy/status trade-off, but may have a good knowledge of the linkages between particular product characteristics and the higher-level goals, as well as about which products offer which characteristics. As regards safety, it may be relevant to know whether a new Korean car with twin airbags is to be preferred to a used Volvo without airbags but with a strong passenger cell and carefully engineered crumple zones, or a tank-like used sports utility whose truck-based chassis results in poor active safety characteristics. Market knowledge that cheap Korean cars have twin airbags, that are not possessed by an ageing Volvo or sports utility, is of little use if one has no idea of the functional effectiveness of alternative safety technologies. But expert knowledge that, of

⁴ In the areas of business advice, some management consultancy firms have come dangerously close to this at times—for example, in the late 1960s/early 1970s, the Boston Consulting Group with its predilection to see strategic issues in terms of experience curves, or McKinsey’s tendency to recommend M-form-style organizational restructuring as the solution to performance shortcomings.

these three options, the old Volvo is the safest, the Korean small car the most practical and the sport-utility most likely to impress the neighbours, leaves the ultimate verdict to the consumer depending on how the three high-level features are weighted, or are ranked in priority terms.

One further point needs to be made explicit at this stage. If we are to speak of a market for preferences, we must recognize that those in search of rules that will help them solve problems may find multiple suppliers who offer different points of view and suggest different rankings. Sometimes, consumers will be able to resolve such conflicts by analyzing the way different suppliers of expertise argue the cases for the various contenders and relating these arguments to higher-level preferences. For example, one motoring authority may be giving greater emphasis to the likely driving experience and safety aspects, whilst another might be stressing interior space and running costs. In other cases, however, consumers may be unclear, due to problems of tacit knowledge, how to relate their higher-level preferences to the cases being made by the authorities and be clear only regarding what the different ultimate recommendations are. In the latter situation, the choice comes down to having some basis for judgment in terms of source credibility, a basis that might be outsourced to yet other authorities rather than relying on personal decision rules or gut feelings. Clearly, there is potential for infinite regress here. If there are indeed mixed recommendations about the quality of rival recommendations, then, at some stage, higher-level preferences will have to cut in, somehow, to resolve the impasse. Consumers who on the basis of satisfactory past experience employ sole suppliers of particular kinds of low-level preferences will avoid such quandaries, but they run the risk that their preferred suppliers could fall behind other suppliers in terms of ability to offer insight.

Agents who solve problems with complex commodities

The domain of reference over which we hold our theory to apply is that of agents constructing a lifestyle (see Earl 1986) as an ensemble of durable goods and complex services, all of which must be competitively maintained. We have in mind the consumer who worries about the resale value of their car or house at the time of purchase, or the lifestyle implications of their furnishings or wardrobe, or the social implications of their taste in music or wine. This is bourgeois economics of course (Parsons 1967). But that does not make it incidental. General problems of knowledge lurk here and may easily be extended to any domain of economic analysis in which choice requires specialized knowledge and in which expertise matters (environmental, public choice, labour, managerial, and so forth). For expository purposes we shall limit our discussion to the intrinsically human aspect of social pretensions driving economic outcomes, which does itself have some pedigree (Veblen 1899).

In a consumer lifestyle, like genes and traits, there is not necessarily a one-to-one mapping between a durable good and a high-level problem. A particular good may solve several problems, such as a car solving mobility and perhaps social relations problems, or perhaps many durable goods may be required to solve a single problem, and to do so by functioning as a system, as in the construction of a house or garden. Or it could be that a system of durable goods and complex services may create new problems, or even provide solutions to problems unforeseen. The point is that once we adopt the perspective of agents facing a set of high-level problems and solving them by assembling and maintaining durable goods and services then there is little basis to array this as a set of

independent problems with independent solutions—hence the concept of a lifestyle linking the systemic nature of the problems with the systemic nature of the solutions.

The general context is of agents demanding commodities in order to solve problems in ways concordant with high-level preferences. No agent makes choices they do not want to make. The problem is that a modern lifestyle presents a surfeit of choices and in many cases substantial knowledge is involved in making choices that will not be the cause of regret. We have already emphasized that this does not threaten the concept of consumer sovereignty, in the sense of consumers only doing things that promote utility. The essence of the problem is that this may not be so straightforward in many cases.

The primary markets for durable goods and complex services refer here to any input into a consumer lifestyle that must then be maintained. This includes such things as home furnishings, kitchenware, haircuts, business suits, medical supplies, automobiles, ISPs, psychiatric counseling, weekends away, and so forth. The common denominator in all such things is that agents enter these markets infrequently. They buy a lounge-suite perhaps every decade. They replace their tyres every two years. They take a holiday when they can. And so forth. Long enough intervals for the opportunities to have changed, presuming of course normal Schumpeterian competition meanwhile. The point is that knowledge (or perhaps even fashions) will have changed since the agent last entered the market. Anyone who has purchased a cell-phone in the past few years will appreciate how fast such changes can occur. This analysis also extends to commodities that are very much designed to introduce constant novelty, such as with the visual entertainment industry, where, in the case of movies, novelty is introduced every second Thursday. We leave it to the reader to fill in further examples. The point is that agents are continually faced with the problem of choosing things over which they have scant basis to choose competently.

The second aspect to emphasize is that these decisions—which home furnishings? which car? which holiday destination?—are complex. These invariably multi-attribute commodities present many things to consider and mistakes may well be costly, due among other things to the imperfection of re-sale markets. For services, re-sale markets are constituted by legal institutions, which are by definition costly to enter.

The upshot is that consumer knowledge problems are ubiquitous in an evolving economy. Learning, or re-learning, may well entail a significant commitment of resources of time and attention. It may not even be possible. But choices nonetheless need to be made by agents seeking to construct and maintain a lifestyle. And this is why the specialist expertise and authority matter. It is why preference entrepreneurs have an important role to play in a modern economy.

The market for preferences provisions the structure of complementarity

Consider some specific aspects of a market for preferences. For instance, do people eat in restaurants and go to coffee shops and not make their own clothes because they feel Ricardo's heavy hand of comparative advantage upon their shoulder? Why would people willingly allow others to constrain their choice set, offering only a limited menu when they could stay at home and cook exactly and only what they prefer above all else? The standard answer pivots about comparative gains from trade in equilibrium and emphasizes knowledge problems in terms of different capabilities to produce different things. This is certainly true in some measure, but there are other aspects that occur off

the equilibria that are no less significant. The skill of the restaurateur, for instance, extends beyond food production and to the effective bundling of a composite product (menu, atmosphere, staff, and so forth). This involves their preferences and is a component of what we choose when we do choose to dine in a restaurant. Similarly, when we purchase modular commodities such as hi-fi or computer hardware, or such bundled services as interior decorations or a package holiday, we often turn to specialists simply because they know what goes with what to produce particular end results. We are choosing their preferences over the space of connections between things.

In this perspective on the nature of markets, we emphasize complementarity or the notion that it is bundles as composite systems that provide much of the context of choice. This is in contrast to the notion of a bundle as a budget-constraint satisfying shopping trolley full of separate items. Expertise comes in to make this set of things function effectively or to coordinate. In this way our preferences are still said to be over outcomes, but bundling particular related commodities together is what achieves those outcomes. The bundling is of commodity relations; this is not simply a bundle of commodities.

It is significant, therefore, that our theory does depend upon the observation that commodities are not generally simple or self-contained. Not everything is an apple or an orange; many are more like AppleTM or OrangeTM (an ISP which bundles telecommunication services as Apple bundles hardware and software solutions). The implication is that often utility cannot be obtained directly from the choice and consumption of a single commodity on its own. In fact, there is an enormous range of commodities that produce no utility whatsoever by themselves. For instance, compact discs are really quite useless in themselves, unless one takes pleasure in throwing them around, or perhaps in the artwork that sometimes adorns them. A tin of chicken soup is equally useless in itself, unless one favours it as art. Both must somehow be read or opened for value to arrive. Generally, then, we must combine various commodities often in very specific ways to obtain utility, and it is this that leads to the notion that the deeper scarcity is not commodities *per se*, but the technology to combine things (see Potts 2000: Chapter 5).

This leads to a change in the locus of scarcity, from elements to connections. In such a systems view of the world in which complementarity and connections matter, the role of preference specialization is to link the various products together and develop effective means of ranking alternative composites as low-level (but not high-level) preferences. The agents who provide these services are a kind of preference entrepreneur who can match, say, products to lifestyles. There are many such realms of professional services that do effectively just that. To a degree, manufacturers also do this: for example, Sony offers DVD technology within its PlayStation II but, for those of us who would find it unthinkable to purchase it in that manner, Sony also offers DVD players as components of hi-fi home theatre systems (cf. Earl, forthcoming).

What follows? A central issue concerns the proportion of the economy that consists of adding value to preferences, and on the welfare implications of this. There are two basic points, the first being that the preference specialization associated with the growth of knowledge will be a function of the complexity and modularity of consumption goods. We would expect that the extent of the market devoted to servicing and offering preferences must increase in proportion to the increased variety and complexity of goods.

Secondly, it would seem reasonable to suppose much the same critique of the psychological effect of the division of labour in production skills will apply also to

consumption skills. Over two centuries ago, Adam Smith noted the ‘stupifying’ effects of the division of labour, a notion nowadays captured via the term ‘alienation’ (see Braverman, 1974) in literature critical of Taylorist ‘scientific management’ and Fordism. We should not presuppose that specialization in preferences is any less corrosive of wellbeing, irrespective of its economic benefits for efficient technologies of choice. There is general disdain with those who are obsessively specialized in their fascination with particular kinds of products, and most people prefer not to be entertained by a download of their knowledge of minutiae. (Here we have in mind the ‘rugby bores’, ‘wine snobs’, ‘hi-fi freaks’, the ‘anoraks’ who can identify a motor vehicle of a particular specification and year at a great distance, etc.—each of whom is prone to have little insight into anything much outside their niche.) On the other hand, a growing service sector ministering to preferences may imply that many people are not confident in their abilities to make up their own minds.⁵ Their anxieties may come from not wanting to end up regretting their choices, seen from their own standpoint. But these may also arise because they are aware that their social standing could suffer in the event that they engage in public displays of consumption that are at odds with social codes of conduct (see further the discussion of conspicuous consumption in Earl, 1999, pp. 248–9). Overall, there thus seem grounds for taking seriously the idea that there is a negative relationship between social welfare and the growth of that part of the service sector that assists people in acquiring preferences.

There are many choices that economic agents make which are in themselves difficult, because of the amount of information that must be gathered and interpreted or because once made the decisions are not easily reversible. How is this problem solved? Who will specialize in the provision of preferences? There are three obvious candidates.

First, it might be the producers themselves, who will have to then educate the consumer about the qualities involved. An example of this would be auto manufacturers entering *grand prix* events, and suchlike, or simply using their advertisements to make the case for particular features offered by their products. However, we might also then ask whether it is the producer or the retailer who is providing this, as can be seen in the services offered by, for instance, full-service PC retailers. Sony is unusual amongst manufacturers of leading-edge domestic electronics product in having its own stores, and possibly these serve as a means of educating Sony about the problems customers need to solve, as well as educating potential customers about the solutions Sony has to offer. With products that are complementary but which tend to be produced by different manufacturers because they require different manufacturing capabilities (Richardson, 1972), the burden of supplying preferences will often tend to be shouldered by retailers who can display and demonstrate synergistic bundles. However, the consumer often still has to make a tradeoff between retailer expertise in terms of knowledge of how to put systems together (as in the case of home furnishing stores that offer room-style displays for those with limited interior design and colour coordination skills) versus expertise in terms of knowledge of a wider range of particular kinds of products considered on their own (as in the case of a specialist bed shop in which the beds are crammed together devoid of sheets, etc., but whose staff may be better able advise on the best way nowadays to get a durable bed that is suitable for an asthmatic).

Second, we might have professional critics, such as those in the restaurant or packaged entertainment industries, or with consumer magazines that help consumers to

⁵ See also Peacock (1976: 1278–9), encapsulating the analysis of Scitovsky’s (1976) classic *The Joyless Economy*.

avoid regrettable choices of products that do not live up to their ‘on paper’ promise entailed in suppliers’ brochures and advertisements. Such agents are perhaps the paradigmatic example of specialization in the provision of objective and high-quality preferences. It is always implicit that for those who do not have time to form good preferences, these suppliers will be sufficient in a set of specific situations (seeing a movie, going to a restaurant, buying a car).

Third, the role might fall to the consumers themselves and work through formal and informal networks of feedback. In this case, preferences flow as a kind of public good. These are the kind of word-of-mouth recommendations that can drive the adoption of new goods, and even engender fashion cycles. Over the long term, within a social group, these recommendations may be traded in with an eye to reciprocal flows with an allowance for the extent to which one derives utility from showing off one’s expertise. This would be part of the larger process of social bartering identified by Pahl (1984). Note that the social flows of product knowledge depend on a mixture of specialization and commonality: good recommendations depend on an appreciation of the recipient’s lifestyle, of the context in which the goods will be consumed. A serious amateur guitarist who for years has not played instruments offered in the novice market may have little off-the-cuff knowledge of how the latter measure up nowadays. However, if a friend seeks advice about purchasing a first guitar for her child, such a person will be easily able to offer third-party advice by accompanying them on a shopping expedition.

In all such processes, agents learn about the utility-producing effects of certain input combinations, and to the extent that these then transfer between agents, the agent can specialize in the coordination of a certain range of preferences. In considering the choice of agents upon whom the consumer might call when in search of preferences, the issue of concerns about opportunism and guile arises. Why would anyone willingly provide their hard-learned preferences for free, to anyone who asked of them? This is ultimately an Arrow-paradox type problem of industrial organization (Arrow 1971: 148). A specialist retailer of, say, hi-fi equipment may be located not far from a bulk-wholesaler of the same. The rational consumer should obviously go to the first with many promises of infinite commitment to purchase and then, once they learn what they should want, turn to the bulk wholesaler for fulfillment. If such behaviour is widespread, then, in the absence of legislation supportive of resale price maintenance, the expert retailer may be driven from the market (cf. Andrews 1993: 296–9), leaving consumers to acquire relevant knowledge by other means, such as consumer magazines—which no doubt some may seek to read within newsagents stores without purchasing them. This (not abnormal behaviour) is clearly a general problem of knowledge externalities and one shot-through the economics of the market for preferences. It is least likely to be a problem in situations in which the consumer will need to seek advice periodically from a particular type of retailer regarding complementary products and where the retailer can dispense that advice particularly effectively on the basis of knowledge of the consumer obtained on a previous occasion. Here, amidst this repeated game, relationship marketing is the order of the day (see further, Earl, 1999: 253–7), but in order to survive, retailers need to have capabilities in terms of sizing up the kinds of potential customers to whom they are devoting their scarce time and expertise. Upper-end hi-fi retailing actually fits this situation fairly well insofar as consumers upgrade their systems a module at a time as their budgets permit, rather than stepping into the market infrequently to purchase entirely new systems. To understand cases with more ambiguous incentive structures, formal or experimental analysis may be warranted. Either way, microeconomic theory

would be much richer if we knew the structure of decision-making along the gradient of retailers of the same object but differing contribution to preferences.

A final issue concerns whether we may then say that preferences actually accumulate in markets, such that more evolved markets have a ‘better quality’ of preferences. This of course sounds absurd from a perspective in which all preferences are located in agents as consumers alone, but if, as we argue, preferences may also reside in intermediaries, then that sentence makes sense. Intuitively, it would seem that this is indeed the case because markets that have existed for a longer period of time or have had more traffic will have institutionalized many of the preferences themselves. We have in mind here the retail districts of New York, Istanbul, Tokyo, Milan and Paris, for instance, or the industrial market districts of Northern Italy, Southern Germany, Shanghai or Singapore. We witness this effect as markets converge upon presenting and offering as ‘wares’ good solutions to problems. Can this factor explain the progression of markets from village *fêtes* through small corner stores, to the development of shopping malls and mega-stores such as *Ikea* or *Harrods*, for instance?⁶ The perspective developed here, following Earl and Potts (2000), suggests that when agents are engaged in browsing behaviour in such markets—as opposed to deliberate search with well-defined preferences and problem specification—these agents are open to accepting the preferences of others. These preferences are better developed and packaged in these latter types of markets (in such media as window and in-store displays, ambience, service and suchlike). Thus, to the extent agents access other people’s preferences and make choices with these, this will be more likely to occur in more highly developed markets.

Conclusion

We have focused our attention on consumer decisions in a particular sort of world, namely one populated by cognitively normal human economic agents, and which is characterized by competitive innovation in product markets. This world of Simon, Hayek and Schumpeter matters for microtheory because of the extent to which it is the world in which modern economic agents actually live—we are not just picking off some refinements about the nature of agent behaviour and coordination in a special-case universe of limited empirical significance. It happens to be a world that is problematic for Samuelson’s (1948) view that we can infer orderings from the choices made by agents. As time passes it is not just the price vector that varies but also the set of commodities on offer and the life-cycle stage at which consumers are poised. Modelling consumer choice in such a world requires more than repackaging the analysis of preference into characteristics space of the kind suggested by Lancaster (1966), not least of all because of the need for the analyst to know how the agent whose choices are observed sees the characteristics produced by the chosen items, and how these observed characteristics minister to higher-level ends sought by the consumer. How the agent sees these outcomes will vary depending on how the agent has obtained knowledge of the products in question and its functionality in respect of higher level preferences. Worse still for the linear

⁶ One of the referees of this paper noted that retailer reputations could be associated with undesirable lock-in/path dependence as preferences become institutionalized. The referee asked, ‘Are Harrods’ preferences of better quality than those of other department stores because they have emerged over a long period of time and because Harrods is *the* name in the area? Or could it be that Harrods, because of its reputation, has a competitive advantage over other stores even though its preferences may not be superior?’

technological analysis of Lancaster's model, it also depends on the interactions that the agent has identified between complementary products.

We have argued that the fundamental knowledge problem that an evolving economy poses for boundedly rational consumers is solved to a significant degree by specialized learning rather than by individuals learning in a self-contained manner across the whole compass of their lives. The aggregate system can still function if this specialized consumer knowledge can be coordinated; hence, the market for preferences. We see the process as entailing a market for preferences in Hodgson's (1988) and Rosenbaum's (1999) sense of the term 'market', insofar as consumers are not seeking insight into how to choose in an unstructured, hit-and-miss manner. Rather, they call upon individuals and organizations that are widely seen as having relevant expertise—or, in the first instance, those whom they know as social information brokers, who can advise them on who have the expertise that they need. This is not simply a market to supply information or advice to manage an already structured choice problem *per se*. Rather, it is a mechanism for coping with flux in the choice environment via the production of knowledge as a secondary market (the market for preferences) to service choice in a primary market of durable goods and complex services. There are certain features here reminiscent of I-O type problems. The agent may either construct their own preferences by learning (individually or socially), or they may outsource them, acquiring their preferences as decision rules in what we have termed the market for preferences. This asserts that agents specialize in preferences and that preferences are distributed in markets.

The core of this paper is the distinction between high-level and low-level preferences. High-level preferences are sovereign to the agent (Stigler and Becker 1977), and determine the problems that need to be solved and minister to the structure of the solutions (Cosmides and Tooby 1994). But unless the agent has already learnt about specific solutions, then these high-level preferences will not generally be enough. Low-level preferences are addressed to the solution of particular problems—in other words, to know that, if *X* is what you most want to achieve, then *Y* is what you most need to achieve it, because of how *Y*'s characteristics serve as means to *X*. By definition, no agent is endowed with these innately. All low-level preferences must be acquired, either through learning or by acquiring someone else's learning as bundled knowledge, in the form of a decision rule. The latter is what we mean by a market for preferences. It is a way of solving a problem defined and controlled by high-level preferences by using low-level preferences. We leave the implications of this perspective to further work. We have indicated briefly here how this may be a significant factor in consumer theory, the economics of transition, I-O, the role of expertise in the service sector and with the demand side constraints upon the growth of knowledge.

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